

Claim 13, as amended, recites:

“An apparatus comprising:

a power-generating wind turbine switch cabinet;

at least one power-generating wind turbine circuit element coupled to the power-generating wind turbine switch cabinet;

a drying arrangement adapted to prevent water deposition onto the at least one power-generating wind turbine circuit element, the drying arrangement including an air flow device in close proximity to the at least one power-generating wind turbine circuit element and generating an air flow moving past the at least power-generating wind turbine circuit element to counteract the water deposition onto the at least one power-generating wind turbine circuit element; and

guiding means directing the air flow from the air flow generating device past the at least one power-generating wind turbine circuit element. ”

Lagerway (WO 01/21956) discloses “a windmill for generating electric current with the aid of a generator driven by vanes. The rotor and the vanes are supported by a common bearing. According to the invention, the stator is positioned in a closed chamber with an air seal between the rotating part and the stationary part of the generator.” {Abstract}. The risk of condensation on the stator coil 20 is reduced further by ensuring that the generator chamber 46 contains only dry air. Various seals are provided to prevent outside air leakage into the generator chamber. The stator windings are further provided with a system for cooling the heat generated in the winding due to the electric current by circulating a cooled fluid. Additionally, the stator winding may use the cooling path described above to circulate a heated fluid to the windings or alternatively use electric heaters in the stator windings. The heating arrangements are intended to prevent moisture formed on cold stator windings from potentially causing shorts. [FIG. 6]

A fan may force air from the machine housing into the generator chamber to maintain an superatmospheric pressure, preventing leakage of moist outside air into the generator chamber through seals and the like. The air intake path to the chamber may include a heater. An air exhaust path may be provided.

The Office Action cites Lagerway as reciting a machine housing that teaches a power generating wind turbine switch cabinet. Applicant respectfully asserts that a machine housing is not a “power generating wind turbine switch cabinet” as cited in the claim. The machine housing is a large component that contains significant mechanical and ventilation equipment needed for the turbine. Such a machine housing is not a switch cabinet. Lagerway nowhere teaches that the machine housing 4 contains switches that are inherently part of a switch cabinet.

Further Lagerway, nowhere teaches an air flow device “*in close proximity to the at least one power-generating wind turbine circuit element*” [Emphasis added]. A fan 50 (FIG. 7) of Lagerway is external to the generator chamber 46 where the stator windings 9 and rotor windings 8, which the Office Action takes to be “power-generating wind turbine circuit element”, are disposed. Applicant respectfully asserts that the fan 50 is not in close proximity to the circuit element as claimed, but outside the generator chamber 46. As described in the specification (Pg 2, Lines 13-19; Pg 4, Lines 22-29), an essential advantage of the invention is to provide an air flow in close proximity to the circuit elements to eliminate the need for high power consumption associated with heating a full switch cabinet. Providing an air flow in close proximity to the circuit element increases the amount of airflow directly passing over the circuit element, thereby improving effectiveness in preventing condensation on the circuit element.

Further, Lagerway nowhere teaches “generating an air flow *moving past* the at least power-generating wind turbine circuit element to counteract the water deposition onto the at least one power-generating wind turbine circuit element” [Emphasis added]. Lagerway does recite sealing the generator chamber 46 to prevent inward leakage of outside moist air and providing a superatmospheric pressure in the generator chamber to prevent outside air from entering. However, claim 13 explicitly requires an air flow device generating an air flow “moving past” the at least one power generating wind turbine circuit element. The air flow moving past the circuit element counteracts the deposition of water. FIG. 5 of Lagerway, as cited in the Office Action, relates to a bearing lubrication unit and provides no teaching relative to Claim 13. FIG. 7 of Lagerway, as cited in the Office Action, illustrates an external air unit 16 with a blower 50 and possibly an external heater 51 to deliver low moisture content air to the generator chamber. The air inlet 52 to the chamber is positioned adjacent to the air outlet 53 of the chamber such that the superatmospheric pressure is maintained in the chamber. An air flow entering the chamber exits through the air outlet 53, which is shown in proximity to

the air inlet 52. However, the airflow does not flow past the circuit element, such that the blowing over the circuit element counteracts the deposition of moisture on the circuit element. Applicant further asserts that as shown from FIG. 7 of Lagerway, the air inlet 52 into the chamber does not dispose any air to be “moving past” the circuit element taken by the Office Action to be the windings. In particular, FIG. 7 shows the inlet 52 to the chamber 46 to be in proximity to the outlet 53 such that an air flow would exit the chamber rather than moving past the circuit element, as recited in Claim 13. Lagerway provides no explicit teaching that any of the air flow “moves past” the circuit element. This is particularly relevant as to the effect cited in the specification as to air flow moving past the circuit element being effective in preventing moisture deposition without the large expenditure of energy that would be required in Lagerway to heat and pressurize the entire chamber.

Further, Lagerway nowhere “teaches guiding means directing the air flow from the air flow generating device past the at least one power-generating wind turbine circuit element.” Such guiding means is explicitly described in the specification (flow guide plate 34 of FIG. 1; Page 4, lines 10-29). In fact, as previously described above, FIG. 7 of Lagerway illustrates an air flow into generator chamber 46 through inlet 52 disposed in close proximity to outlet 53. Lagerway teaches no guiding means within the chamber 46 for directing air flow past the at least one power-generating wind turbine circuit element. If anything, Lagerway teaches that airflow enters through inlet 52 and exits through outlet 53 without being guided.

Because as described above Lagerway does not teach each and every element of Claim 13, the rejection under 35 USC 102(b) must be withdrawn and Claim 13 be allowed. Further because Claims 14-22 depend from Claim 13, for the reasons cited above, they must also be allowed.

Roethel (US 1722825) is a patent issued July 30, 1929 for a roof ventilator of a closed automobile body. Roethel describes a structure for ventilating the inside of an automobile with a fan while preventing outside rain and snow from entering (Col 1 lines 6-20).

Roethel does not teach a power-generating wind turbine switch cabinet. Roethel does not teach at least one power generating wind turbine circuit element coupled to coupled to

the power generating wind turbine switch cabinet. Roethel does not teach a drying arrangement adapted to prevent water deposition onto the at least one power generating wind turbine circuit element. Roethel does not teach a drying arrangement including an air flow device in close proximity to the at least one power-generating wind turbine circuit element or moving past the at least one power-generating wind turbine circuit element to counteract water deposition on the circuit element. Roethel does not teach guiding means for directing the air flow from the air flow generating device past eh at least one power generating wind turbine circuit element. Roethel alone or in combination with Lagerway similarly fails to remedy the deficiencies cited above with respect to Claim 13.

Streed (US 3,332,620) recites a humidity control device to prevent condensation on the formation on the exterior surfaces of buildings due to cold external temperatures (Col. 1, lines 7-13). As with Roethel, Streed does not teach a power-generating wind turbine switch cabinet. Streed does not teach at least one power generating wind turbine circuit element coupled to coupled to the power generating wind turbine switch cabinet. Streed does not teach a drying arrangement adapted to prevent water deposition onto the at least one power generating wind turbine circuit element. Streed does not teach a drying arrangement including an air flow device in close proximity to the at least one power-generating wind turbine circuit element or moving past the at least one power-generating wind turbine circuit element to counteract water deposition on the circuit element. Streed does not teach guiding means for directing the air flow from the air flow generating device past eh at least one power generating wind turbine circuit element. Streed alone or in combination with Lagerway and Roethel similarly fails to remedy the deficiencies cited above with respect to Claim 13.

Claim 14, as amended recites:

The apparatus of Claim 13, wherein the drying arrangement further comprises:

At last one heating device in close proximity to the at least one power-generating wind turbine circuit element adapted for heating an air passing by the at least one power-generating wind turbine circuit element, wherein the guiding means further directs the air

flow from the air flow generating device past the at least one heating device.

Applicant respectfully submits that Lagerway, alone or in combination with Roethel and Streed fails to teach the heating device in close proximity to the at least one power generating wind turbine circuit element. The combination further fails to teach air passing by the circuit element. The combination further fails to teach guiding means directing the air flow from the air flow generating device past the heating device. Applicant respectfully requests that the rejection of claim 14 be withdrawn and the claim be allowed.

Claim 16, as amended recites:

The apparatus of Claim 15, wherein the air flow device further generates an air flow circulating within the power-generating wind turbine switch cabinet and the guiding means directs the air flow past the at least one power-generating wind turbine circuit element and the cooling element.

Applicant respectfully submits that Lagerway, alone or in combination with Roethel and Streed fails to teach or suggest the guiding means directs the air flow past the at least one power-generating wind turbine circuit element and the cooling element. Further neither Roethel nor Streed rectify this deficiency. Applicant respectfully requests that the rejection of claim 16 be withdrawn and the claim be allowed.

Claim 23, as amended, recites:

“controlling an operational parameter of a power-generating wind turbine by at least one power-generating wind turbine circuit element coupled to a power-generating wind turbine switch cabinet;

generating an airflow in the internal space of the power-generating wind turbine switch cabinet flowing past the at least one power-generating wind turbine circuit element using an air flow generating device to counteract a deposition of condensation water onto the at least one power-generating wind turbine circuit element; and

guiding the generated airflow past the at least one power-generating wind turbine

circuit element by guiding means.”

For the reasons cited above with respect to Claim 13, Lagerway does not teach generating an airflow in the internal space of the power-generating wind turbine switch cabinet *flowing past the at least one power-generating wind turbine circuit element* using an air flow generating device to counteract a deposition of condensation water onto the at least one power-generating wind turbine circuit element [Emphasis added]. Providing an overpressure in a chamber as is done by Lagerway is not the same as flowing the airflow past the circuit. Such overpressure, does not provide the same effect as a direct flow past the circuit element. Similarly, Lagerway does not teach guiding the generated airflow past the at least one power turbine circuit element by guiding means. As previously described with respect to Claim 13, Lagerway does no guiding within the chamber and the airflow is not over the circuit element, but according to FIG. 7 likely exits the chamber near the entrance. Whereas the present invention enhances the absorptive effect of a directed air flow on moisture in the cabinet by a guiding means, Lagerway does not and is therefore less effective with a larger consumption of energy, as previously described.

Because as described above Lagerway does not teach each and every element of Claim 23, the rejection under 35 USC 102(b) must be withdrawn and Claim 23 be allowed. Further, for the reasons cited with respect to Claim 13, neither Roethel nor Streed acting alone or in combination with Lagerway remedy those deficiencies.

Given that claims 24-28 depend from independent claim 23, which is patentable as discussed above, Applicant respectfully submits that dependent claims 24-28 are also patentable over the cited references. Accordingly, Applicant requests that the rejection of claims 24-25 and 28 under 35 USC §102(b) and claims 26-27 under 35 USC §103(a) be withdrawn. Applicant submits that claims 23-28 are in condition for allowance and such action is respectfully requested.

Claim 24, as amended, recites:

“guiding the generated airflow past a heating device by guiding means;  
heating an air in close proximity to the at least one power-generating wind turbine circuit element; and  
guiding the heated airflow past the at least one power-generating wind turbine circuit element by guiding means.”

As described above with respect to Claim 13, Lagerway does not teach guiding the generated airflow past a heating device by guiding means or a guiding means. Lagerway does not teach heating an air in close proximity to the circuit. Further Lagerway does not teach guiding the generated airflow past the circuit element. The above elements of the present invention all advantageously counteract the deposition of moisture on the circuit element and are not taught by Lagerway. Because Lagerway does not teach each and every element of Claim 24, Applicant respectfully requests that the rejection of Claim 13 under 35 USC 102(b) be withdrawn and the claim allowed. Further for the reasons cited above, neither Roethel nor Streed alone or in combination with Lagerway teaches each and every element of Claim 24.

In view of the foregoing, Applicant respectfully submits that the application is in order for allowance. Favorable reconsideration and prompt allowance of the application

are respectfully requested.

It is believed that no fees or charges are applicable to the filing of this paper. However, if necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account 070849 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, please contact the undersigned at the phone number listed below.

Respectfully submitted,

January 25, 2010  
Date

/Edward J. Smith/  
Edward J. Smith  
Reg. No. 55,631

General Electric Company  
1 River Road  
Schenectady, New York 12345  
Telephone: (518) 385-2822